

# FAN IMPELLER AND FAN MOTOR

## Abstract

Small, high-performance centrifugal fan for cooling portable electronic devices. The centrifugal fan motor employs a cantilever-type impeller constituted by an impeller blade unit that includes a lower endwall portion at axial one end, having a wall surface for breaking the flow of air along the rotational axis, and an opening at the other axial end. The impeller is configured so that the radius  $r$  to the outer circumference of the impeller blade unit is smaller than the axial height  $h$  of the impeller. When an airflow that enters through the impeller opening is forced out towards outer periphery of the impeller blade unit, windage loss at the wall surface of the lower endwall portion of the impeller is reduced, which realizes high-efficiency cooling performance that complements motor performance.